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HRS DOCUMENTATION RECORD

for

Tenaha Wood Treating

Tenaha, Texas

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TCEQ Records Management Center
Austin, Texas

December 2005

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HAZARD RANKING SYSTEM DOCUMENTATION RECORD

for

Tenaha Wood Treating
Tenaha, Shelby County, Texas
TXD072691462; TCEQ SWR# F1539

Prepared by:

Texas Commission on Environmental Quality
Superfund Site Discovery and Assessment Program
Austin, Texas

December 2004

HRS

DOCUMENTATION RECORD

Tenaha Wood Treating
Tenaha, Shelby County, Texas

December 2004

HRS DOCUMENTATION RECORD

Tenaha Wood Treating

Tenaha, Shelby County, TEXAS

TXD072691462; TCEQ SWR# F1539

SIGNATURE PAGE

Gary L. Hazelwood
Texas Commission on Environmental Quality
Superfund Site Discovery and Assessment Program
Project Manager

12-16-04
Date

Lloyd Johnson
Texas Commission on Environmental Quality
QA/QC Officer

12/27/04
Date

Wesley G. Newberry
Texas Commission on Environmental Quality
Superfund Site Discovery and Assessment Program
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12/22/04
Date

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Texas Commission on Environmental Quality
Site Investigation and Community Relations Section
Section Manager

1/13/05
Date

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HRS DOCUMENTATION RECORD - REVIEW COVER SHEET

Name of Site: Tenaha Wood Treating

Current Contact Person: Roy D. Lane (Current Property Owner)

Documentation Record: Gary L. Hazelwood, TCEQ (903) 535-5108

Pathways of Concern: Surface Water Migration and Soil Exposure Pathways

Surface Water Pathway

The Surface Water Overland/Flood Migration Pathway was not evaluated for drinking water threat, since no documented surface water intakes are located within the target distance limit. The potential impact to the human food chain would minimally increase the site score, but can not be included in this report due to a data gap of supporting evidence that Flat Fork Creek is actually a fishery.

Seven sediment samples were collected on July 28, 2004 (Ref. 3, pp. 03006 - 03008; and 4, photographs 12 - 17). Two of the sediment samples, SE-01 and SE-02, were background samples (see Figure 2). Five sediment samples, SE-03 through SE-07, were collected from the Palustrine/Forested/Broad leaved Deciduous/Temporarily Flooded (PFO1A) wetland (Ref. 5). Sediment sample SE-03 was collected at the PPE to the PFO1A wetland (see Figure 2). Sediment sample SE-04 was collected approximately six feet downstream of sediment sample SE-03. Sediment sample SE-05 was collected approximately 0.1 mile downstream of the PPE at sediment sample SE-03. Sediment sample SE-07 is a duplicate of sediment sample SE-06. Sediment samples SE-06 and SE-07 were collected approximately 0.5 miles downstream of the PPE at sediment sample SE-03. The environmental threat was evaluated and observed releases of several dioxins were documented to impact a HRS qualifying PFO1A wetland (Ref. 6, pp. 06221, 06233, 06245, 06258, and 06271; and Table 1). Including both banks of the unnamed intermittent creek to Flat Fork Creek, a one to two mile length of a HRS qualifying PFO1A is subject to Level II observed releases from the site (Ref. 5; and Figure 3). The assigned wetland rating value is 50 (Ref. 1, Table 4-24, and 4.1.4.3.1.2).

TABLE 1
BACKGROUND AND OFFSITE SEDIMENT SAMPLE ANALYSIS RESULTS

Constituents	SE-01		SE-02		3X Highest Bkg	SE-03		SE-04		SE-05		SE-06		SE-07 Dup of SE-06	
DIOXINS pg/g	RESULT	*SQL*	RESULT	*SQL*		RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*
1,2,3,4,6,7,8-HpCDD	710	*6.8*	180	*6.1*	2130	**3800 J**	*7*	1000	*7*	540	*6.7*	640	*7.3*	590	*6.8*
Total HpCDD	1600	*6.8*	360	*6.1*	4800	**6500**	*7*	1800	*7*	940	*6.7*	1100	*7.3*	1000	*6.8*
1,2,3,4,6,7,8-HpCDF	22	*6.8*	17	*6.1*	66	**470**	*7*	**130**	*7*	**69**	*6.7*	**87**	*7.3*	**80**	*6.8*
1,2,3,4,7,8,9-HpCDF	ND	*6.8*	ND	*6.1*	NA	**61**	*7*	**16**	*7*	**7.5**	*6.7*	**9**	*7.3*	**7.8**	*6.8*
Total HpCDF	75	*6.8*	56	*6.1*	225	**2300**	*7*	**620**	*7*	**290**	*6.7*	**380**	*7.3*	**340**	*6.8*
1,2,3,4,7,8-HxCDF	ND	*6.8*	ND	*6.1*	NA	**42**	*7*	**10**	*7*	**5.2 J**	*6.7*	**6.8 J**	*7.3*	**6.3 J**	*6.8*
1,2,3,6,7,8-HxCDF	ND	*6.8*	ND	*6.1*	NA	**12**	*7*	**3.8 J**	*7*	ND	*6.7*	ND	*7.3*	ND	*6.8*
2,3,4,6,7,8-HxCDF	ND	*6.8*	ND	*6.1*	NA	**6.9 J**	*7*	ND	*7*	ND	*6.7*	ND	*7.3*	ND	*6.8*
Total HxCDF	25	*6.8*	12	*6.1*	75	**650**	*7*	**160**	*7*	66	*6.7*	**84**	*7.3*	74	*6.8*
OCDD	5700 J	*14*	6500 J	*12*	19500	**32000 J**	*14*	13000 J	*14*	7400 J	*13*	7000 J	*15*	6600 J	*14*
OCDF	43	*14*	41	*12*	129	**1700**	*14*	**580**	*14*	**260**	*13*	**350**	*15*	**330**	*14*
Total PeCDF	ND	*6.8*	ND	*6.1*	NA	**27**	*7*	**6.1**	*7*	ND	*6.7*	ND	*7.3*	ND	*6.8*

Shaded/Bold - Met the observed release criteria.
NA - Not applicable.
J - Result is estimated.

SQL - Sample quantitation limit.
ND - Undetected at the laboratory reported detection limit (IDL).

Soil Exposure Pathway

Seven soil samples were collected on July 27, 2004 (Ref. 3, pp. 03001, 03002, and 03004; and 4, photographs 1, 3 - 6, 8, and 10). Two of the soil samples were background samples, SO-01 and SO-02, see Figure 2 for their locations. Four soil samples were collected from the site, SO-03 through SO-06. SO-05 is a duplicate of soil sample SO-04. Soil sample SO-07 was collected along the overland drainage pathway, between the site and the PPE to the wetland. The Soil Exposure Pathway has documented observed releases of inorganics, semivolatiles, and highly elevated levels of dioxins (see Table 2). Table 3 calculates the total dioxin concentrations for each of the site's source samples. The residential TRRP level for dioxin is 1.0 ppb. Each of the onsite soil sample locations has documented dioxin levels in excess of the TRRP level, ranging from fourteen to twenty-nine times the TRRP level (Ref. 6, pp. 06123, 06135, 06150, and 06163; and Table 3). The targets are the resident individual, Joe D. Lane, and a resident population of five residents living within 200 feet of level I concentrations of dioxins (Ref. 3, p. 03003, and Figure 2). The nearby population threat does not contribute to the pathway score, since residential land is excluded from Attractiveness/Accessibility value determination (Ref. 1, section 5.2.1.1).

TABLE 2
BACKGROUND AND SOURCE SOIL SAMPLE ANALYSIS RESULTS

Constituents	SO-01		SO-02		3X Highest Bkg	SO-03		SO-04		SO-05 Dup of SO-04		SO-06		SO-07	
SEMIVOLATILE µg/Kg	RESULT	*SQL*	RESULT	*SQL*		RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*
Pentachlorophenol	ND	*720*	ND	*690*	NA	**86000**	*15000*	**89000**	*20000*	**82000**	*20000*	**2500000**	*9000000*	ND	*3600*
2-methylnaphthelene	ND	*13*	ND	*12*	NA	ND	*13*	ND	*360*	ND	*360*	**2500 J**	*660*	ND	*65*
Phenanthrene	ND	*7.2*	ND	*6.9*	NA	ND	*7.4*	**200 J**	*200*	**310 J**	*200*	**2600 J**	*360*	ND	*36*
Pyrene	ND	*7.2*	ND	*6.9*	NA	ND	*7.4*	**490 J**	*200*	**370 J**	*200*	**4300 J**	*360*	ND	*36*
DIOXINS pg/g	RESULT	*SQL*	RESULT	*SQL*		RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*
1,2,3,4,6,7,8-HpCDD	44	*5.4*	68	*5.2*	204	**670000**	*5600*	**1100000**	*5900*	**1000000**	*5900*	**1200000**	*5400*	**7400**	*270*
Total HpCDD	96	*5.4*	120	*5.2*	360	**1000000**	*5600*	**1700000**	*5900*	**1600000**	*5900*	**2100000**	*5400*	**13000**	*270*
1,2,3,4,6,7,8-HpCDF	6.4	*5.4*	12	*5.2*	36	**61000**	*5600*	**170000**	*5900*	**150000**	*5900*	**180000**	*5400*	**1000**	*270*
1,2,3,4,7,8,9-HpCDF	ND	*5.4*	ND	*5.2*	NA	3200	*5600*	**20000**	*5900*	**18000**	*5900*	**21000**	*5400*	ND	*270*
Total HpCDF	18	*5.4*	31	*5.2*	93	**230000**	*5600*	**800000**	*5900*	**720000**	*5900*	**910000**	*5400*	**4500**	*270*
1,2,3,7,8,9-HxCDD	ND	*5.4*	ND	*5.2*	NA	**2100**	*56*	**15000**	*5900*	**16000**	*5900*	**25000**	*5400*	ND	*270*
1,2,3,4,7,8-HxCDD	ND	*5.4*	ND	*5.2*	NA	**350**	*56*	**9700**	*5900*	**8900**	*5900*	**14000**	*5400*	ND	*270*
1,2,3,6,7,8-HxCDD	ND	*5.4*	ND	*5.2*	NA	**37000**	*56*	**27000**	*5900*	**24000**	*5900*	**32000**	*5400*	210 J	*270*
Total HxCDD	8.4	*5.4*	9	*5.2*	27	**81000**	*56*	**150000**	*5900*	**130000**	*5900*	**230000**	*5400*	**790**	*270*
1,2,3,4,7,8-HxCDF	ND	*5.4*	ND	*5.2*	NA	**5500**	*56*	**13000**	*59*	**11000**	*59*	**18000**	*54*	ND	*270*
1,2,3,6,7,8-HxCDF	ND	*5.4*	ND	*5.2*	NA	**2100**	*56*	**3200**	*59*	**2700**	*59*	**3300**	*54*	ND	*270*
1,2,3,7,8,9-HxCDF	ND	*5.4*	ND	*5.2*	NA	**480**	*56*	**100**	*59*	**66**	*59*	**91**	*54*	ND	*270*
2,3,4,6,7,8-HxCDF	ND	*5.4*	ND	*5.2*	NA	**3300**	*56*	**1900**	*59*	**1200**	*59*	**1800**	*54*	ND	*270*
Total HxCDF	ND	*5.4*	7.2	*5.2*	21.6	**160000**	*56*	**170000**	*59*	**150000**	*59*	**220000**	*54*	**1200**	*270*
OCDD	1400	*11*	500	*10*	4200	**4300000**	*11000*	**7100000**	*12000*	**6800000**	*12000*	**8200000**	*11000*	**63000**	*540*
OCDF	16	*11*	28	*10*	84	**74000**	*11000*	**1000000**	*12000*	**1200000**	*12000*	**790000**	*11000*	**4400**	*540*
1,2,3,7,8 -PeCDD	ND	*5.4*	ND	*5.2*	NA	**210**	*56*	**3000**	*59*	**2400**	*59*	**4200**	*54*	ND	*270*
Total PeCDD	ND	*5.4*	ND	*5.2*	NA	**400**	*56*	**23000**	*59*	**19000**	*59*	**49000**	*54*	ND	*270*
1,2,3,7,8 -PeCDF	ND	*5.4*	ND	*5.2*	NA	**2000**	*56*	**320**	*59*	**230**	*59*	**270**	*54*	ND	*270*
2,3,4,7,8 -PeCDF	ND	*5.4*	ND	*5.2*	NA	**1600**	*56*	**840**	*59*	**660**	*59*	**1000**	*54*	ND	*270*
Total PeCDF	ND	*5.4*	ND	*5.2*	NA	**15000**	*56*	**8200**	*59*	**6900**	*59*	**9100**	*54*	ND	*270*
2,3,7,8-TCDD	ND	*1.1*	ND	*1*	NA	8.9 J	*56*	**170**	*59*	**150**	*59*	**420**	*54*	ND	*54*
Total TCDD	ND	*1.1*	ND	*1*	NA	52	*56*	**6100**	*59*	**5200**	*59*	**17000**	*54*	ND	*54*
2,3,7,8-TCDF	ND	*1.1*	ND	*1*	NA	**350**	*11*	**39**	*12*	**27**	*12*	**26**	*11*	ND	*54*
Total TCDG	ND	*1.1*	ND	*1*	NA	**1900**	*11*	**670**	*12*	**560**	*12*	**1100**	*11*	ND	*54*

TABLE 2 CONTINUED
BACKGROUND AND SOURCE SOIL SAMPLE ANALYSIS RESULTS

Constituents	SO-01		SO-02		3X Highest Bkg	SO-03		SO-04		SO-05 Dup of SO-04		SO-06		SO-07	
INORGANIC mg/Kg	RESULT	*SQL*	RESULT	*SQL*		RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*	RESULT	*SQL*
Antimony	ND	*0.21*	ND	*0.17*	NA	**0.38 J**	*0.21*	**44.6**	*0.2*	**35.4**	*0.22*	**1.2**	*0.15*	**0.37 J**	*0.21*
Arsenic	2.5	*0.058*	1.6	*0.049*	7.5	**106**	*0.06*	**1770**	*0.056*	**1850**	*0.062*	**188**	*0.042*	**20.7**	*0.06*
Chromium	11.1 J	*0.079*	7.0 J	*0.067*	33.3	**90.8 J**	*0.081*	**2850 J**	*0.076*	**3360 J**	*0.084*	**259 J**	*0.057*	**42.2 J**	*0.082*
Copper	11.6 J	*0.089*	0.92	*0.075*	34.8	32.0 J	*0.091*	**1300 J**	*0.086*	**1680 J**	*0.095*	**75.6 J**	*0.064*	12.0 J	*0.092*
Lead	7.8	*0.036*	5.2	*0.031*	23.4	5.3	*0.037*	**26.2**	*0.035*	**25.3**	*0.039*	13	*0.026*	13.7	*0.038*

Shaded/Bold - Met the observed release criteria.
ND - Undetected at the laboratory reported detection limit (IDL).
J - Result is estimated.
SQL - Sample quantitation limit.
NA - Not applicable.

Table 3 TRRP Dioxin Calculations for On-Site Soil Samples

Dioxin Congeners	Analytical Results in pg/g				TEFs	TEF Converted Values			
	SO-03	SO-04	SO-05	SO-06		SO-03	SO-04	SO-05	SO-06
1,2,3,4,6,7,8-HpCDD	670000	1100000	1000000	1200000	0.01	6700	11000	10000	12000
1,2,3,4,6,7,8-HpCDF	61000	170000	150000	180000	0.01	610	1700	1500	1800
1,2,3,4,7,8,9-HpCDF	3200	20000	18000	21000	0.01	32	200	180	210
1,2,3,7,8,9-HxCDD	2100	15000	16000	25000	0.1	210	1500	1600	2500
1,2,3,4,7,8-HxCDD	350	9700	8900	14000	0.1	35	970	890	1400
1,2,3,6,7,8-HxCDD	37000	27000	24000	32000	0.1	3700	2700	2400	3200
1,2,3,4,7,8-HxCDF	5500	13000	11000	18000	0.1	550	1300	1100	1800
1,2,3,6,7,8-HxCDF	2100	3200	2700	3300	0.1	210	320	270	330
1,2,3,7,8,9-HxCDF	480	100	66	91	0.1	48	10	6.6	9.1
2,3,4,6,7,8-HxCDF	3300	1900	1200	1800	0.1	330	190	120	180
OCDD	4300000	7100000	6800000	8200000	0.0001	430	710	680	820
OCDF	74000	1000000	1200000	790000	0.0001	7.4	100	120	79
1,2,3,7,8-PeCDD	210	3000	2400	4200	1	210	3000	2400	4200
1,2,3,7,8-PeCDF	2000	320	230	270	0.05	100	16	11.5	13.5
2,3,4,7,8-PeCDF	1600	840	660	1000	0.5	800	420	330	500
2,3,7,8-TCDF	350	39	27	26	0.1	35	3.9	2.7	2.6
Total Of All Dioxin Congeners Per On-Site Residential Soil Sample						14004.4	24135.9	21605.8	29038.2
2,3,7,8-TCDD	8.9	170	150	420	1	8.9	170	150	420
Total of All Congeners + 2,3,7,8-TCDD (pg/g)						14,013.3	24,305.9	21,775.8	29,458.2
Conversion of pg to mg (x 0.000000001)= mg/g						0.0000140	0.0000243	0.0000217	0.0000294
mg/g to mg/kg						0.0140	0.0243	0.0217	0.0294
TOTAL dioxin concentration (ppb)						14.0	24.3	21.7	29.4

TEFs - Toxicity Equivalency Factors for Dioxin-Like Compounds, from Figure 30 TAC §350.76(d)(2)(B)
Residential 0.5 Acre TRRP level for dioxin is 1.0 ppb; each onsite soil sample exceeds the TRRP level

Pathways, Components, or Threats Not Evaluated:

Groundwater Pathway

Potential release of hazardous substances to the groundwater pathway is of concern for this site. A groundwater sampling event was conducted on July 27, 2004, by the TCEQ (Ref. 3, pp. 03003,03004,and 03005; and 4, photographs 2, 7, 9, and 11). Five groundwater samples were collected, see Figure 2. GW-01 was a background drinking water well sample. GW-02 was from the closest offsite well, used to water cattle and not a human drinking water well. GW-03 is the closest offsite drinking water well sample location to the site. GW-05 is a duplicate of GW-04,which were collected from the onsite well. Lead was detected in excess of the Maximum Contaminant Level (MCL) in the commercial livestock watering well (Ref. 6, p. 06068). Lead was also detected as an observed release to onsite soil, but was not detected in the onsite well and is questionable whether it can be attributed to the site. The well owner provided information that the pump had recently been replaced in the well. Even though the elevated lead level would be difficult to attribute to the site, there are plans to resample this well, to either confirm or reject the earlier detected lead level. Bis(2-ethylhexyl)phthalate, a common laboratory contaminant, was technically documented as observed releases in two nearby wells (GW-02 and GW-03), but at levels well below MCL and not attributable to the site. Only one hazardous substance, chromium, met the criteria of an observed release in the onsite drinking water well (Ref.6, pp. 06056 and 06060). The Maximum Contaminant Level MCL for chromium is 0.1 mg/L. The highest level of chromium detected in the on-site well was 0.00475 mg/L. It was determined that such a low detected level of chromium in the onsite well, would be difficult to attribute to the site, as opposed to naturally occurring levels. Although the potential impact to the groundwater pathway is of concern for this site and was investigated, its pathway score was calculated and found not to significantly contribute to the site score, so the Groundwater Migration Pathway is not being evaluated in this HRS report.

Air Migration Pathway

The Air Migration Pathway is not being evaluated since the pathway score does not increase the site score. There is no observed release for the Air Migration Pathway.

(Although evaluation of these pathways is not documented in this report, the TCEQ is concerned for all pathways surrounding the site. However, evaluation of these pathways would not have significantly increased the overall site score.)

NOTE TO READER

The following rule was used when citing references in the HRS Documentation Record:

> The State predecessor agencies: Texas Water Quality Board (TWQB), Texas Department of Water Resources (TDWR), Texas Water Commission (TWC), Texas Air Control Board (TACB), and Texas Natural Resource Conservation Commission (TNRCC) referred to throughout this report are now known as the Texas Commission on Environmental Quality (TCEQ). The new agency, TCEQ, became effective September 1, 2002, as mandated under State House Bill 2912 of the 77th Regular Legislative Session.

HRS DOCUMENTATION RECORD

Name of Site:	Tenaha Wood Treating
Date Prepared:	12/2004
CERCLIS Site ID Number:	TXD072691462
TCEQ ID#:	F1539

SITE LOCATION:

Street Address of Site:	275 County Road 4382 (see Figure 1, Site Location Map).
City, County, State:	Tenaha, Shelby County, Texas
Topographic Map:	US Geological Survey 7.5 Minute Topographic Map, Tenaha East, Tex. (Figure 1).
Latitude: *31^0 55' 01"* North	**Longitude:** *94^0 13' 54"* West
TCEQ Region:	10

SITE SCORING SUMMARY:

Pathway Scores:

Groundwater Migration Pathway -	NE
Surface Water Migration Pathway -	60.00
Soil Exposure Pathway -	12.00
Air Migration Pathway -	NE

NE - Not Evaluated

HRS SITE SCORE: 30.59

SITE SUMMARY

General Description of the Site:

Tenaha Wood Treating is a 6 acre site, located south of the city limits of Tenaha, in Shelby County (Ref. 8, pp. 08001, 08003, and 08012; 9, p. 09003; and Figure 1). The site is located at Latitude 31° 55' 01" North and Longitude 94° 13' 54" West, at 275 CR 4382, Tenaha, Shelby County, Texas (Ref. 3, p. 03003). The site is bordered by rural areas to all sides. CR 4382 runs along the site's north property line (Figure 1). The facility is unsecured, it does not have a gate to limit access. No warning signs are posted along the site's perimeter.

Site History:

On July 10, 1962, E. W. Muckleroy purchased the site property from Mr. J.R. and Irene Christian (Ref. 10).

On September 28, 1978, Jerry W. Reynolds purchased two tracts of land from Farmers State Bank of Center, Texas, totaling approximately six acres of land (Ref. 11). On September 28, 1978, Farmers State Bank of Center, Texas issued Jerry W. Reynolds a Vender's Lien note for the principal amount of $23,553.00 (Ref. 12).

Jerry W. Reynolds began operating Tenaha Wood Treating, in 1980, preserving wood with pentachlorophenol (Ref. 8, pp. 08008 and 08019; and 9, pp. 09003). In 1982 the facility switched from using pentachlorophenol to chromated copper arsenate (CCA) for preserving wood (Ref. 8, p. 08008). No diking structure or runoff control existed around the chemical storage tank. On December 5, 1984, green staining of the soil and several drainage pathways void of vegetation were noted (Ref. 8, pp. 08016 and 08017).

On April 2, 1984, a Deed of Trust documents that Jerry W. Reynolds borrowed $19,230.97 from Randy McLeroy of Farmers State Bank of Center Texas (Ref. 13).

The site was abandoned during 1985 (Ref. 8, pp. 08008 and 08019). On January 7, 1986, Farmers State Bank of Center, Texas was the highest bidder for the Tenaha Wood Treating Site property and took ownership of the property after Jerry Reynolds defaulted on his promissory note (Ref. 14).

On April 22, 1994, Roy Lane purchased the two tracts of land, formerly the Tenaha Wood Treating site, from Farmers State Bank of Center, Texas (Ref. 15 and 16).

On September 14, 1994, Fluor Daniel, Inc. submitted a "Site Inspection Prioritization" for the Tenaha Wood Treating site to the U.S. EPA (Ref. 9). The report summary states that no samples have been collected (Ref. 9, p. 09005). Based on the Fluor Daniel, Inc. report, the U.S. EPA recommended that the site receive a No Further Remedial Action Planned under Superfund (NFRAP) Decision and the site has been referred to the Texas Natural Resource Conservation Commission (Ref. 9, p. 09001).

On August 29, 1995, current property owner, Roy Lane granted verbal permission for site access to collect soil samples (Ref. 17).

On September 12, 1995, Gary Hazelwood of the TCEQ conducted a site visit and soil sampling event. This 1995 sampling event was the first time soil samples were collected to evaluate conditions at the site. The site was determined to be ineligible for the State Superfund Program until documented attempts to pursue the current owner through enforcement to resolve any potential endangerment to public health and safety or the environment has been conducted. Elevated levels of hazardous substances were documented in onsite soil (Ref. 18, p. 18003).
Arsenic..... 1,300.46 mg/Kg
Chromium..... 2,434.55 mg/Kg
Copper..... 1,408.96 mg/Kg
Pentachlorophenol..... 4,458.82 mg/Kg

November 29, 1995, the site was referred to the Field Operations Division for enforcement (Ref. 19).

On January 4, 1999, Pat Harris of the TCEQ contacted Roy Lane and obtained permission to enter the property. Roy Lane reported an underground storage tank was removed during October 1998 and stated he had plans to build a house onsite (Ref. 20).

On January 12, 1999, Pat Harris of the TCEQ collected two soil samples from onsite soil. Elevated levels of hazardous substances was documented in onsite soils. (Ref. 21, pp. 21003 and 21009).
Arsenic..... 1,280.00 mg/Kg
Chromium..... 1,980.00 mg/Kg
Copper..... not reported
Pentachlorophenol..... 3,820.00 mg/Kg

On September 12, 2002, Pat Harris of the TCEQ conducted a site visit and soil sampling event. Roy Lane is reported to now reside onsite. Elevated levels of hazardous substances were again documented in onsite soils (Ref. 22, p. 22006).
Arsenic..... 212 mg/Kg
Chromium..... 257 mg/Kg
Copper..... 86.9 mg/Kg
Lead..... 12.9 mg/Kg
Pentachlorophenol..... 17.7 mg/Kg

On December 4, 2002, the TCEQ issued a Notice of Violation Letter to Roy Lane, for failure to prevent the imminent threat of discharge of industrial solid waste into or adjacent to waters of the State (Ref. 23).

On December 18, 2002, the TCEQ held a conference with Roy Lane to explain the purpose of the Notice of Violation letter, answer Roy Lane's questions, and advise Roy Lane to complete documentation to show financial inability to clean up the contaminated area (Ref. 24).

On December 18, 2002, a Tele-Conference Record states that Roy Lane was provided financial ability to pay documents to complete and return by January 3, 2003 (Ref. 25).

On December 26, 2002, Roy Lane submitted a response letter to the Notice of Violation, with completed inability to pay claim forms attached (Ref. 26).

On January 3, 2003, Pat Harris submitted a Financial Assurance Analysis Request to the TCEQ Financial Assurance Section Manager (Ref. 27).

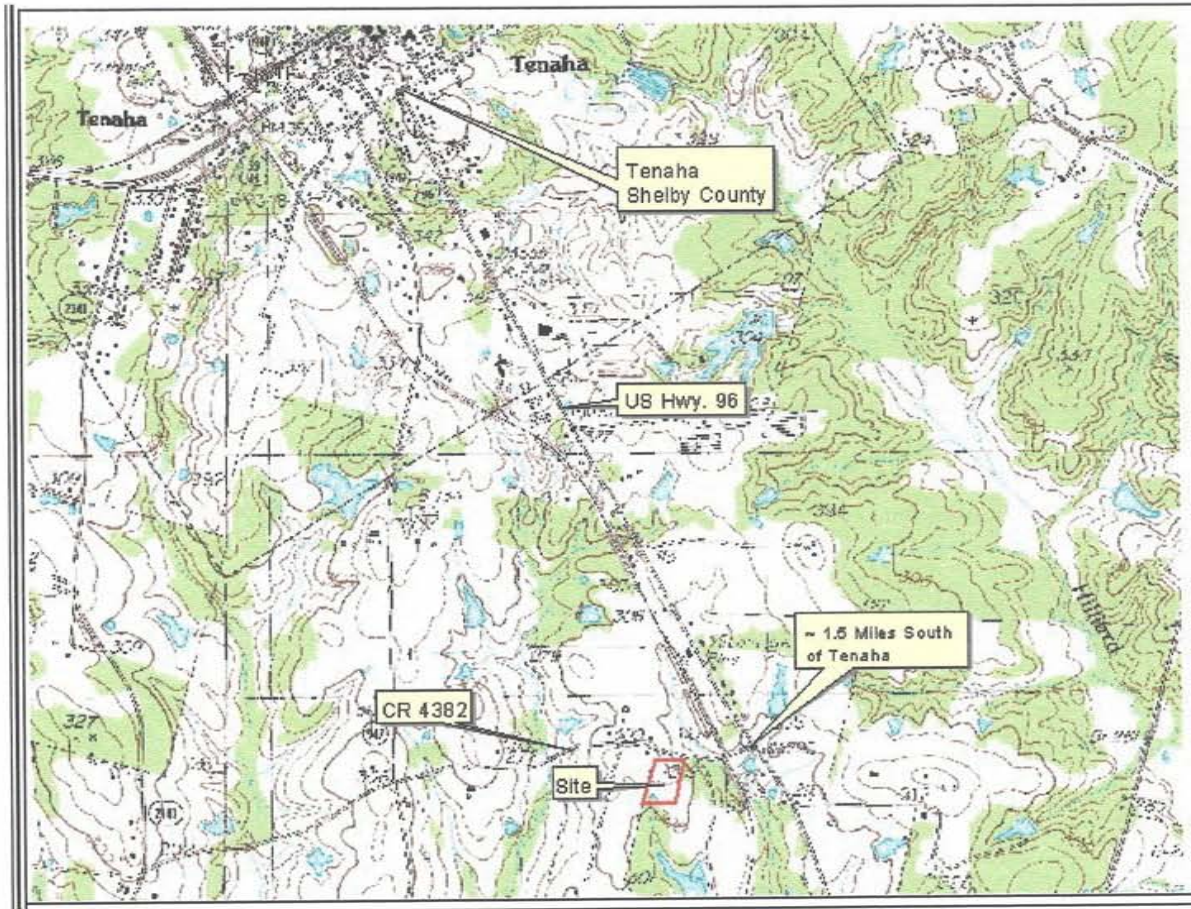
On May 5, 2003, Paige Seidenberger, TCEQ Financial Analyst, documented that Roy Lane does not have the ability to pay for any costs associated with the remediation of contamination on his property (Ref. 28).

On May 15, 2003, the Tenaha Wood Treating Site was referred to the Remediation Division for State Superfund Program evaluation (Ref. 29).

On July 1, 2004, Roy Lane granted the TCEQ access to investigate the site conditions and to mitigate any threat to human health or the environment (Ref. 30).

On July 27, 2004, the TCEQ collected onsite groundwater and soil samples, as well as offsite groundwater, soil, and sediment samples (Ref. 6). Elevated levels of hazardous substances was documented in onsite soil samples.

Arsenic..... 1,850 mg/Kg...(Ref. 6, p. 06152)
Chromium..... 3,360 mg/Kg...(Ref. 6, p. 06152)
Copper..... 1,680 mg/Kg...(Ref. 6, p. 06152)
Lead..... 26.2 mg/Kg.....(Ref. 6, p. 06137)
Pentachlorophenol..... 250 mg/Kg.....(Ref. 6, p. 06161)



The base data sets used are the Linden and Lanier, TX 1:24,000 Digital Raster Graphic (DRG), which are scanned images of U.S. Geological Survey topographic maps. UTM NAD 83 Zone 15

TCEQ

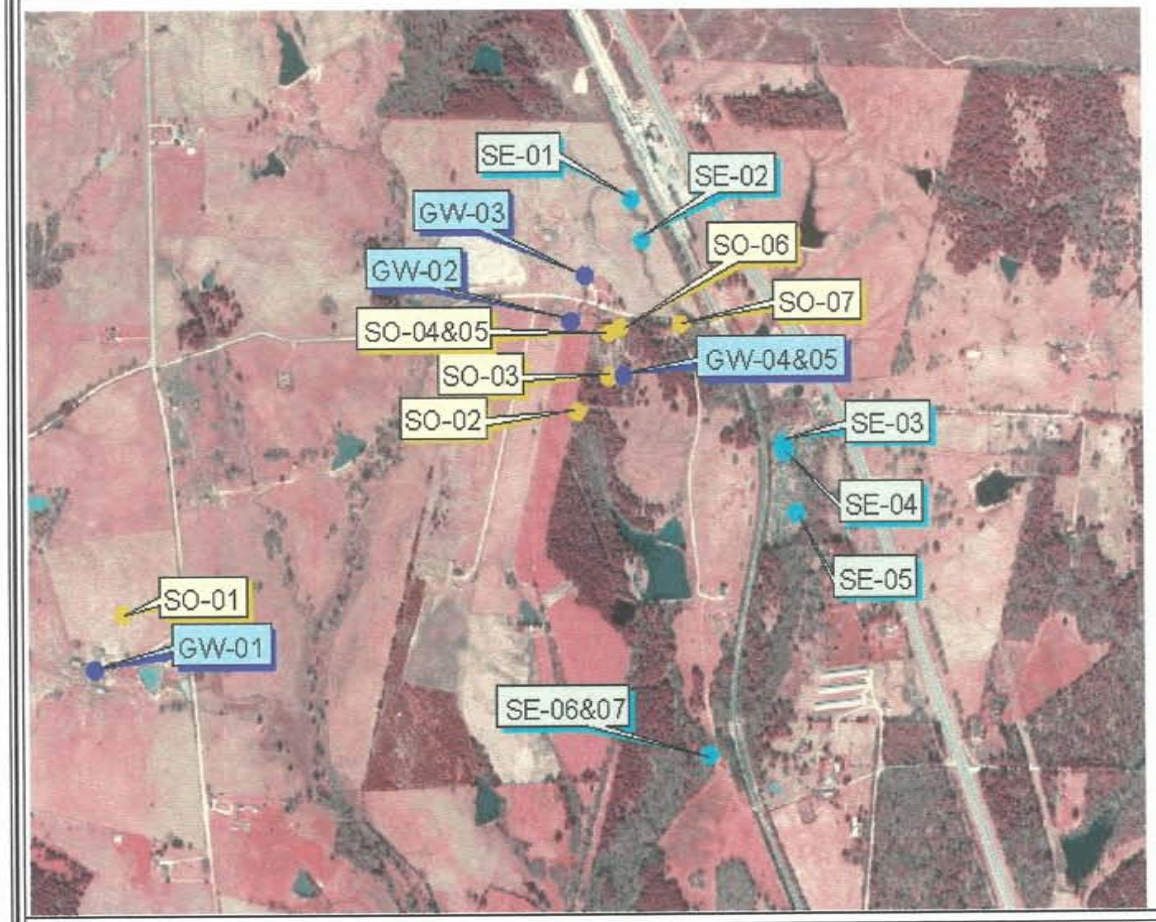
Tenaha Wood Treating Site

Tenaha (Shelby County) Texas

TXD072691462

N

Figure 1
Site Location Map



0.5 0 0.5 Miles

Source

The base data sets used are the Tenaha East NW and SE, TX Digital Orthoquarter Quadrangle (DOQQ), which are digital photographs processed by the TCEQ GIS Section. UTM NAD 83 Zone 15

TCEQ

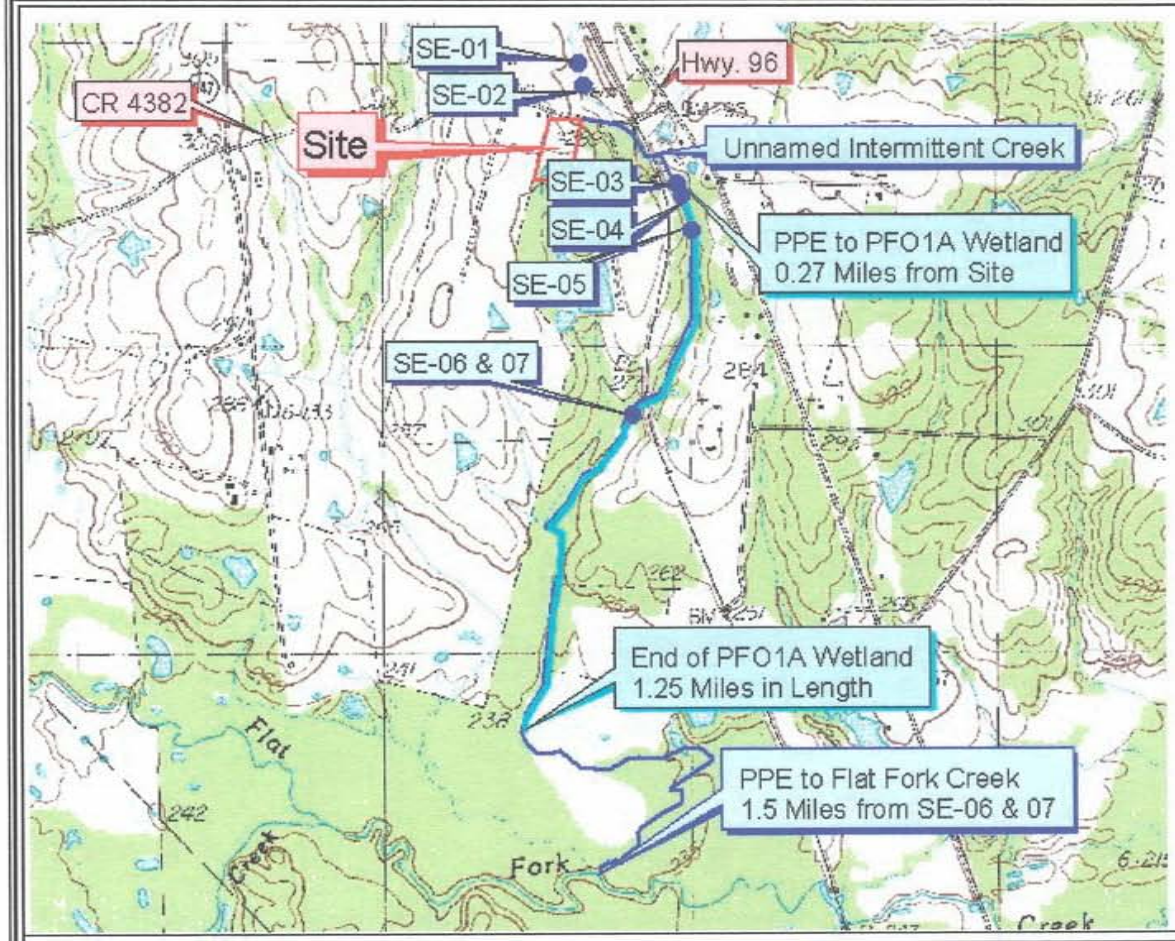
Tenaha Wood Treating Site

Tenaha (Shelby County) Texas

TXD072691462

N

Figure 2 Sample Location Map



The base data set used is the Tenaha East, TX 1:24,000 Digital Raster Graphic (DRG), which is a scanned image of a U.S. Geological Survey topographic map. UTM NAD 83 Zone 15

TCEQ

Tenaha Wood Treating Site

Tenaha (Shelby County) Texas

TXD072691462

N

Figure 3 Surface Water Pathway Map and Sediment Sample Locations

REFERENCES

Reference Number	Description of the Reference
1.	U.S. Environmental Protection Agency, 40CFR Part 300, *Hazard Ranking System*, Appendix A, 55 FR 51583, December 1990.
2.	U. S. Environmental Protection Agency, *Superfund Chemical Data Matrix (SCDM)*. January 2004.
3.	Hazelwood, Gary, Superfund Site Discovery and Assessment Program, Texas Commission on Environmental Quality, Sampling Event Field Notes. July 27-28, 2004. 8 pages.
4.	Hazelwood, Gary, Superfund Site Discovery and Assessment Program, Texas Commission on Environmental Quality, Photographs, July 27-28, 2004. 9 pages.
5.	U.S. Department of the Interior. National Wetland Inventory Map, Tenaha East, Tex., 7.5 Minute Topographic Quadrangles. February 1980. 1 page.
6.	ECS Environmental Chemistry Services. Analytical Data Package for Drinking Water Wells, Soil, and Sediment Samples, collected on July 27 and 28, 2004. 284 pages.
7.	Reserved.
8.	U.S. Environmental Protection Agency, Potential Hazardous Waste Site Inspection Report. October 13, 1988. 44 pages.
9.	U.S. Environmental Protection Agency, Superfund Site Strategy Recommendation - Region 06. September14, 1994. 5 pages.
10.	Shelby County Records, Warranty Deed, Volume 402, pp. 25 & 26. July 10, 1962. 2 pages.
11.	Shelby County Records, Warranty Deed, Volume 550, pp. 71 & 72. September 19, 1978. 2 pages.
12.	Shelby County Records, Warranty Deed - Vendor's Lien, Volume 550, pp. 196 & 197. September 28, 1978. 2 pages.
13.	Shelby County Records, Deed of Trust, Volume 111, pp. 27 through 30. April 2, 1984. 4 pages.
14.	Shelby County Records, Trustee's Deed, Volume 662, pp. 94 and 95. January 10, 1986. 2 pages.

15. Shelby County Records, Special Warranty Deed, Volume 771, pp. 345 through 347. April 22, 1994. 3 pages.

16. Shelby County Records, Plat Map. Undated document. 1 page.

17. Hazelwood, Gary, TNRCC Investigator, Telephone Memo to the File, to Roy Lane, Property Owner. August 29, 1995. 1 page.

18. Hazelwood, Gary, TNRCC Investigator, Superfund Site Discovery and Eligibility Determination Checklist. September 12, 1995. 24 pages.

19. Newberry, Wesley, Superfund Site Discovery and Assessment Section Leader, TNRCC to John Young, TNRCC Field Operations Director, Interoffice Memorandum. November 29, 1995. 1 page.

20. Harris, Pat, TNRCC Field Operations Investigator, to Roy Lane, Property Owner, Telephone Memo To The File and attachment. January 4, 1999. 6 pages.

21. Maxim Technologies, Inc., to Pat Harris, TNRCC Field Operations Investigator, Soil Sample Analysis Results. January 12, 1999. 49 pages.

22. Harris, Pat, TCEQ Field Operations Investigator, Investigation Report and Soil Sample Analysis Results. September 12, 2002. 43 pages.

23. Kelly, Susan, TCEQ Beaumont Region Office Waste Section Team Leader, to Mr. Roy Lane, Site Owner, Notice of Violation Letter. December 4, 2002. 4 pages.

24. Texas Commission on Environmental Quality, Field Operations, Beaumont Regional Office, and Mr. Roy Lane, Property Owner, Conference Record. December 18, 2002. 2 pages.

25. Texas Commission on Environmental Quality, Field Operations, Beaumont Regional Office, and Mr. Roy Lane, Property Owner, Tele-Conference Record. December 18, 2002. 1 page.

26. Lane, Roy, Property Owner, to TCEQ, Beaumont Region 10, Notice of Violation Response Letter. December 26, 2002. 2 pages.

27. Harris, Pat, TCEQ Field Operations Investigator, to John Racanelli, TCEQ Financial Assurance Section Manager, Interoffice Memorandum. January 3, 2003. 3 pages.

28. Seidenberger, TCEQ Financial Analyst, to Susan Kelly, TCEQ Beaumont Region Office Waste Section Team Leader, Interoffice Memorandum. May 5, 2003. 1 page.

29. Harris, Pat, TCEQ Field Operations Investigator, to David Davis, TCEQ Remediation Division Director, Interoffice Memorandum. May 15, 2003. 2 pages.

30. Lane, Roy D., Property Owner, Consent For Access To Property, to Texas Commission on Environmental Quality. July 1, 2004. 1 page.

31. Hazelwood, Gary, TCEQ Investigator, Interoffice Memorandum, to the File. October 27, 2004. 1 page.

WORKSHEET FOR COMPUTING HRS SITE SCORE

		S	S^2
1.	Ground Water Migration Pathway Score (S_{gw}) (from Table 3-1, line 13)	NE	NE
2a.	Surface Water Overland/Flood Migration Component (from Table 4-1, line 30)	60.00	3600.00
2b.	Ground Water to Surface Water Migration Component (from Table 4-25, line 28)	NE	
2c.	Surface Water Migration Pathway Score (S_{sw}) Enter the larger of lines 2a and 2b as th pathway score.	60.00	3600.00
3.	Soil Exposure Pathway Score (S_s) (from Table 5-1, line 22)	12.00	144.00
4.	Air Migration Pathway Score (S_a) (from Table 6-1, line 12)	NE	
5.	Total of $S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2$		3744.00
6.	**HRS Site Score** Divide the value on line 5 by 4 and take the square root	**30.59**	

TABLE 4-1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor Categories and Factors			Maximum Value	Value Assigned
DRINKING WATER THREAT **Not Evaluated, go to next component scoresheet.**				
Drinking Water Threat Score				
1.	Observed Release **(Observed releases are documented in Table 1)**		550	550
2.	Potential to Release by Overland Flow:			
	2a.	Containment	10	__
	2b.	Runoff	25	__
	2c.	Distance to Surface Water	25	__
	2d.	Potential to Release by Overland Flow (Lines 2a x (2b + 2c))	500	__
3.	Potential to Release by Flood:			
	3a.	Containment (Flood)	10	__
	3b.	Flood Frequency	50	__
	3c.	Potential to Release by Flood (Lines 3a x 3b)	500	__
4.	Potential to Release (Lines 2d + 3c, subject to a maximum of 500)		500	__
5.	Likelihood to Release (Higher of Lines 1 and 4)		550	550
Waste Characteristics				
6.	Toxicity/Persistence		*	__
7.	Hazardous Waste Quantity		*	__
8.	Waste Characteristics		100	__
Targets				
9.	Nearest Intake		50	__
10.	Population:			
	10a.	Level I Concentrations	**	__
	10b.	Level II Concentrations	**	__
	10c.	Potential Contamination	**	__
	10d.	Population (Lines 10a + 10b + 10c)	**	__
11.	Resources		5	__
12.	Targets (Lines 9 + 10d + 11)		**	__

TABLE 4-1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

DRINKING WATER THREAT (Concluded)

Factor Categories and Factors			Maximum Value	Value Assigned
Drinking Water Threat Score				
13.	Drinking Water Threat Score ((Lines 5 x 8 x 12)/82,500, subject to a maximum of 100)		100	
HUMAN FOOD CHAIN THREAT **Not Evaluated, due to lack of a documented fishery, go to next component.**				
Likelihood of Release				
14.	Likelihood of Release (Same value as Line 5)		550	_
Waste Characteristics				
15.	Toxicity/Persistence/Bioaccumulation		*	_
16.	Hazardous Waste Quantity		*	_
17.	Waste Characteristics		1,000	_
Targets				
18.	Food Chain Individual		50	_
19.	Population:			
	19a.	Level I Concentrations	**	_
	19b.	Level II Concentration	**	_
	19c.	Potential Human Food Chain Contamination	**	_
	19d.	Population (Lines 19a + 19b + 19c)	**	_
20.	Targets			
	(Value from Lines 18 + 19d)		**	_
Human Food Chain Threat Score				
21.	Human Food Chain Threat Score ((Lines 14 x 17 x 20)/82,500 subject to a maximum of 100)		100	_

TABLE 4-1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor Categories and Factors			Maximum Value	Value Assigned
ENVIRONMENTAL THREAT				
Likelihood of Release				
22.	Likelihood of Release (Same Value as Line 5) **(See Tables 1 and 2. Observed releases of dioxins are attributable to the site)**		550	550
Waste Characteristics				
23.	Ecosystem Toxicity/Persistence/ Bioaccumulation **(Based on Pyrene: 10000x1.0x50,000=500,000,000)**		*	500,000,000
24	Hazardous Waste Quantity **(Ref. 1, Sec. 2.4.2.2) the wetland is subject to Level II concentrations of dioxins**		0	100
25.	Waste Characteristics		1,000	320
Targets				
26.	Sensitive Environment:			
	26a.	Level I Concentrations	**	—
	26b.	Level II Concentrations **(Ref. 1, Table 4-24; and 5, both banks of the Level II PFO1A wetland total greater than 1 to 2 miles in length)**	**	50
	26c.	Potential Contamination	**	—
	26d.	Sensitive Environments		
		(Lines 26a + 26b + 26c)	**	—
27.	Targets (Value from Line 26d)		**	50
Environmental Threat Score				
28.	Environmental Threat Score			
	((Lines 22 x 25 x 27)/82,500, subject to a maximum of 60) **(550x320x50)/82,500=106.67**		60	60.00
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE FOR A WATERSHED				
29.	WATERSHED SCORE***			
	(Lines 13 + 21 + 28, subject to a maximum of 100)		100	60.00
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE				
30.	Component Score (S_{of})*** (Highest score from Line 29 for all watersheds evaluated, subject to a maximum of 100)		100	60.00

TABLE 5-1
SOIL EXPOSURE PATHWAY SCORESHEET

Factor Categories and Factors			Maximum Value	Value Assigned
RESIDENT POPULATION THREAT				
Likelihood of Release				
1.	Likelihood of Exposure **(Ref. Tables 2 and 3) Level I observed releases of dioxins are documented onsite.**		550	550
Waste Characteristics				
2.	Toxicity **(Ref. 2)** 2,3,7,8-TCDD		*	10,000
3.	Hazardous Waste Quantity **(Ref. 1, Section 2.4.2.2) the hazardous constituent quantity is not adequately determined, therefore a value of 10 is assigned.**		*	10
4.	Waste Characteristics **(Ref. 1, Table 2-7)**		100	18
Targets				
5.	Resident Individual **(Ref. 3, p. 03001; and 4, Photograph 3) Roy Lane lives on a property with an area of observed contamination, located within 200 feet**		50	50
6.	Resident Population:			
	6a.	Level I Concentrations **(Ref. 3, p. 03001; and 4, Photograph 4) five people live within 200 feet of Level I Dioxins**	**	50
	6b.	Level II Concentrations	**	—
	6c.	Resident Population (Lines 6a + 6b)	**	50
7.	Workers		15	—
8.	Resources		5	—
9.	Terrestrial Sensitive Environments		***	—
10.	Targets (Lines 5 + 6c + 7 + 8 + 9)		**	100
Resident Population Threat Score				
11.	Resident Population Threat (Lines 1 x 4 x 10)		**	990,000
NEARBY POPULATION THREAT				
Likelihood of Exposure				
12.	Attractiveness/Accessibility		100	—
13.	Area of Contamination **(Ref. 1, Table 5-7)**		100	20
14.	Likelihood of Exposure **(Ref. 1, Section 5.2.1.1) Excludes any land used for residences.**		500	0

* Maximum value applies to waste characteristics category
** Maximum value not applicable
*** No specific maximum value applies to factor. However, pathway score based solely on terrestrial sensitive environments is limited maximum of 60
**** Do not round to the nearest integer

TABLE 5-1
SOIL EXPOSURE PATHWAY SCORESHEET

Factor Categories and Factors		Maximum Value	Value Assigned
NEARBY POPULATION THREAT (Concluded)			
Waste Characteristics			
15.	Toxicity	*	10,000
16.	Hazardous Waste Quantity	*	10
17.	Waste Characteristics	100	18
Targets			
18.	Nearby Individual **(Ref. 1, Section 5.2.3.1) There is a resident individual, therefore a factor value of 0 is assigned.**	1	0
19.	Population Within 1-Mile **(Ref. 1, Table 5-10; and 31)**	**	0.06
20.	Targets (Lines 18 + 19)	**	0.06
Nearby Population Threat Score			
21.	Nearby Population Threat **Line 14, The Nearby Population Likelihood of Exposure value of zero eliminates the nearby population threat score.** (Lines 14 x 17 x 20)	**	0
SOIL EXPOSURE PATHWAY SCORE			
22.	Soil Exposure Pathway Score *** (S_3)(Lines 11 + 21)/82,500, subject to a maximum of 100)	100	12

* Maximum value applies to waste characteristics category
** Maximum value not applicable
*** No specific maximum value applies to factor. However, pathway score based solely on terrestrial sensitive environments is limited maximum of 60
**** Do not round to the nearest integer